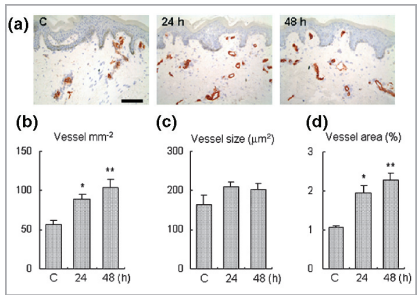
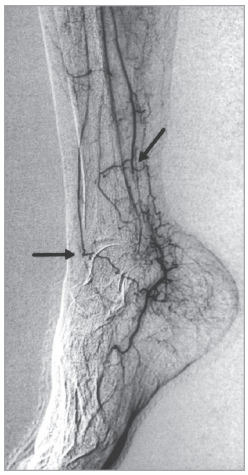
Infrared exposure induces angiogenesis in human skin *in vivo*



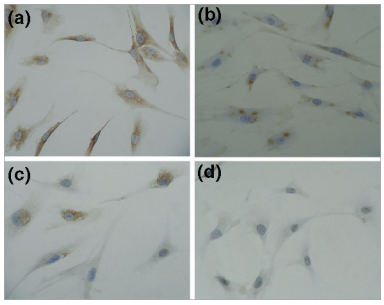
Human skin is frequently exposed to infrared (IR) radiation from sunlight or other artificial sources such as heaters. Exposure to IR radiation increases skin temperature up to 42 ºC. Kim *et al*. demonstrate that IR exposure or heat treatment to human skin increases vascular endothelial growth factor and decreases thrombospondin-2, leading to skin angiogenesis, and that IR-induced skin angiogenesis can be partially caused by the effects of heat in human skin *in vivo*. Therefore, the biological effects of IR radiation or heat on human skin may be more serious than previously thought. *Br J Dermatol* 2006; 155:1131–1138.

Limb artery involvement in scleroderma



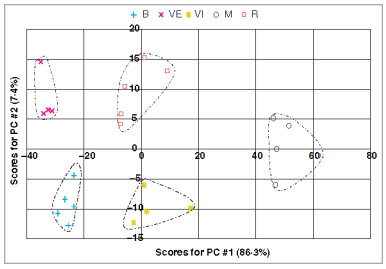
Although digital ulcerations frequently occur in patients with systemic sclerosis (SSc), macrovascular involvement has been thought to be relatively rare. Hasegawa *et al*. have performed limb arteriography in eight patients with SSc exhibiting digital ulceration or gangrene. Macrovascular involvement was detected in seven of eight patients. In three patients, occlusion was limited to the digital arteries. However, the occlusion extended to the arteries proximal to the digits in four patients. Macrovascular involvement detected with arteriography is thus not rare in SSc patients with digital ulceration or gangrene. *Br J Dermatol* 2006; 155:1159–1164

Effect of small interfering RNA on the expression of connective tissue growth factor and type I and III collagen in skin fibroblasts of patients with systemic sclerosis



Connective tissue growth factor (CTGF) plays an important role in the tissue fibrosis of systemic sclerosis (SSc). Xiao *et al*. demonstrate for the first time that the small interfering RNA targeting CTGF inhibits its expression of CTGF and type I and III collagen in dermal fibroblasts from patients with SSc. These results are clinically important because they suggest that silencing CTGF expression might facilitate a potential therapeutic approach for SSc. *Br J Dermatol* 2006; 155:1145–1153.

Volatile fingerprinting for dermatophyte detection



The incidence of dermatophytoses has recently been on the rise due to heightened susceptibility in the immune system of populations. Routine clinical testing for identifying these fungi is very time consuming (up to 3 weeks) which delays the prospect of appropriate treatment. It was shown that by using sensor array systems (electronic noses) four different *Trichophyton* species could be sensitively differentiated within 96 h based on their production of volatile fingerprints. This approach could have significant clinical impact in terms of diagnosis – taking less than a week, and resulting in suitable drug administration and ease in monitoring efficacy of treatment. The Figure shows discrimination between four species and blank media. *Br J Dermatol* 2006; 155:1209–1216.